Farmer in the Dell

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Part I: Overview of Business

•Pocahontas County Extension is one of 100 county campuses that connect the needs of Iowans with Iowa State Extension and Outreach.

•The Pocahontas County Extension Council, county staff, and ISU County Extension and Outreach staff work together to bring research-based learning opportunities to citizens.The goal of the extension is to build a Strong Iowa.

- Pocahontas County began with 4-H clubs in townships to meet the needs of the youth in the 1920s.

Part II: Job Specifics

While at the extension, I have worked with both the county youth coordinator and the county program coordinator. The program specialist and I attended a field day presented by the area agronomist and other field specialists from ISU. I also participated in several agricultural activities I can apply to my classroom. During the county fair, I served as a judge for several events. I will be a certified field scout before completing my externship.

Part III: Introduce the Problem

You are working as a biological agronomist. You have been called to a school garden which has been flooded multiple times in one growing season. You have been contacted to examine the chemistry of the soil. The goal is to "put the life back into the land" for the next growing season.

Part IV: Background

- Invest soil characteristics and their impact on plant growth and health (Soil Chemistry, Plant Anatomy and Physiology)
- Examine the microbiology on soil through the use of petri dishes
- Identify problems associated with flooding (disease, pests, weeds) Plant Pathology

https://www.soils4teachers.org/lessons-and-activities

http://www.yladlivingsoils.com.au/ABoutUs/biologicalagriculture.html

Part V: Business Solution

The extension has the "expert" resources to aide in solving the problem:

- Field agronomist
- Master Gardening Program
- Waypoint Analytical (soil testing)
- ISU Outreach

Part VI: Student Solutions

•The goal is for students to recommend a recovery plan for the garden based on test results. Test results should show the depletion of major soil nutrients (nitrogn, phosphorus, potassium, calcium, and magnesium) and a change in soil micro organisms (bacteria and molds).